Speed

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What is Brainbox?
Thanks to the team

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Using research to maximise impact
10 steps to developing an intervention

1. Identify the target behaviours
2. Review the literature
3. Identify any population sub-groups
4. Define the theoretical model: dual process
5. Understand any barriers to change
6. Develop the intervention objectives
7. Select the BCTs
8. Develop the intervention content
9. Map the intervention
10. Pilot and evaluate
Example: NSAC20

Short-life NDORS course for 20mph speeders.

- More negative, less positive beliefs about speeding.
- Increase skills in identifying speed limits.
- Recognise personal responsibility for speed choice and its impact on others.
Recent research

• Drivers overestimate how often others violate road rules (Warner and Aberg, 2014).

• Three types of 20mph drivers: champions; pragmatists; and opponents. Media campaigns could promote champions’ norms. (Toy et al., 2014).

• Interaction between mood and passengers where happy mood plus passengers means faster speeds (Rhodes et al., 2015).

• People who are angered while driving speed up (Roidl et al., 2014).

• After stopping at traffic lights in low-speed areas drivers can resume at a higher speed unless they are reminded of the limit (Gregory et al., 2014).

• Implementation intentions reduce speeding in unintentional speeders (Elliott et al., 2014).
How this helps

• Challenge descriptive norms (perceptions of what other drivers do).
• Use risk perception and moral norms (it’s wrong to speed).
• Target emotions.
• Provide skills in scanning the environment to help identify the speed limit and detect hazards.
• Include implementation intentions.
The NSAC20 evaluation

• Does the course meet its objectives?
• Is the course more or less effective for any population sub-groups?
• Should the course continue or should it be subsumed into NSAC?
Participants

• 751 NSAC20 clients recruited from five pilot sites.
• 57% male.
• Age range 17-81+ Most were 31-40 (21%), 41-50 (23%) or 51-60 (20%).
• Most had passed their test more than 21 years ago (57%) with only 4% passing in the past 2 years.
• Most were driving for work (33%) or on a social or leisure trip (24%).
Males report speeding significantly more often than females.
Did you know you were speeding?
Predictors of intentions to speed in a 20mph area

• Believing it’s more difficult to avoid speeding
• Believing it’s less wrong to speed
• Male gender
• (Not knowing the speed limit becomes a predictor after the course)
Results
Positive beliefs about speeding

- No pressure from the car behind: Before 50%, After 40%
- Getting there faster: Before 30%, After 20%
- Not holding up other drivers: Before 20%, After 15%
- Better fuel economy: Before 15%, After 10%

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Negative beliefs about speeding

- More difficult to detect hazards
- More risk I'll be injured
- More risk I'll damage vehicle
- More risk of collision
- More risk I'll injure others

Before vs. After
Negative beliefs about speeding

Before | After
--- | ---
Feeling less safe | 20% | 40%
Other drivers disapprove | 30% | 60%
Community disapproves | 40% | 70%
Risk of losing licence | 50% | 70%
Risk of being caught | 60% | 70%
Self-efficacy

A significant decrease in difficulty, both $p<0.001$
Norms

A statistically significant increase in how wrong clients believe it would be to speed on 20mph roads. Mean scores increased from 7.8 to 8.2 ($t(727) = -6.05$), $p < 0.001$

<table>
<thead>
<tr>
<th>Speed Limit</th>
<th>Less</th>
<th>Same</th>
<th>More</th>
</tr>
</thead>
<tbody>
<tr>
<td>20mph - before</td>
<td>47%</td>
<td>48%</td>
<td>5%</td>
</tr>
<tr>
<td>20mph - after</td>
<td>49%</td>
<td>46%</td>
<td>5%</td>
</tr>
<tr>
<td>30mph - before</td>
<td>50%</td>
<td>48%</td>
<td>2%</td>
</tr>
<tr>
<td>30mph - after</td>
<td>51%</td>
<td>46%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Barriers

- Others
- Speeding
- When the roads are quiet
- Keeping the car to 20
- Unfamiliar area
- Speed limit not clearly signed

Before vs After
Behaviour – hot off the press

• A statistical trend for less speeding on 20mph roads ($p = 0.057$), likely to be significant as more questionnaires are received.

• A significant interaction between time and gender, with the course having greater impact on 20mph speeding in males ($F = 4.14$, $p = 0.39$).
What do we know?

- NSAC20 successfully:
  - Increases negative beliefs and decreases positive beliefs about speeding;
  - Increases skills in identifying speed limits and confidence in being able to drive within the limit;
  - Strengthens moral norms about speeding, although it does not affect descriptive norms.

- Leads to a decrease in self-reported speeding in 20mph areas, particularly for males.
Using research to maximise impact

• Review the course:
  – What isn’t working as expected?
  – What is working?

• Revise the course:
  – Should it continue?
  – Based on the research, do the objectives need to change?
  – Strengthen any weak areas.
  – Update the trainers.
Thank you